

A more detailed account of this curious creature is being prepared by Dr. Jordan and myself, which will eventually be published, with a more detailed description and account of its anatomy and morphology, and a discussion of its relations to the true earwigs.

I may add that Dr. Jordan informs me that the mandibles are provided with a tooth beyond the centre of the inner edge, differing from *A. esau*, and the upper lip is much longer.

It is especially noteworthy that in the abdomen of the female we find ten tergites fully developed, as in the male; this is a striking difference from the true earwigs, in the females of which, as is well known, the seventh and eighth segments are vestigial.

Castle Hill House, Dover:

March 25th, 1912.

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THREE NEW SPECIES OF THE "ALBIMANA" GROUP OF THE  
GENUS *HETERONEURA* (DIPTERA)

BY J. E. COLLIN, F.E.S.

When Czerny revised the family *Heteroneuridae* in 1903,\* the only species possessing a strong pair of dorso-central bristles in front of the thoracic suture recognised by him was *albimana*, Meig.; there are, however, other undoubtedly distinct species belonging to this group, and having been fortunate enough to capture two of these species during the last few years in sufficient numbers to prove that the male genital characters upon which all the species are mainly founded are reliable specific distinctions, I venture now to publish the descriptions.

***Heteroneura caledonica*, n. sp. ♂ ♀.**

Resembling *H. albimana*, Mg., but with only two pairs of orbital bristles; vibrissæ much shorter; male hypopygium much larger, the lamellæ long and recurved at the tip (Fig. 1).

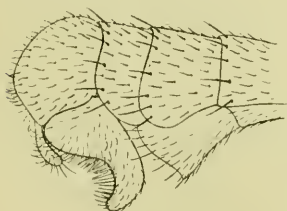


Fig. 1. *H. caledonica*, ♂ × 40.

The face, palpi, and antennæ are in no way darkened except the last named about the base of the arista, the arista somewhat shorter than in *albimana*, hind orbital bristle twice as long as the front one and about midway between it and the inner vertical bristle, decussate bristles midway between the upper and lower orbital bristles. The four posterior legs almost entirely pale, more extensively so

\* Wien. Ent. Zeit., xxii, pp. 61-106, pls. 1-111.

than in *albimana*. Thorax of the female as extensively darkened as in the male or more so. The cloud at end of wing more extended than in *albimana*, reaching back half-way from tip of wing to end of subcostal vein.

I have seen specimens from Scotland only, and have examined nine males (two in the late Mr. Verrall's Collection, four in the British Museum, two in the Hope Museum, Oxford, and one in the Zoological Museum, Cambridge), and twenty-two females (four in the late Mr. Verrall's Collection, nine in the British Museum, two at Oxford, and seven at Cambridge). They were captured by Col. Yerbury and Mr. C. G. Lamb at Nethy Bridge (Inverness) in June, July, and August, and by Col. Yerbury at Golspie (Sutherland), in August.

### *Heteroneura gentilis*, n. sp. ♂ ♀.

Resembling *caledonica* in possessing only two pairs of orbital bristles, and in colour of palpi and antennæ, in shortness of vibrissæ, and in thorax of female being as extensively darkened as in the male, but resembling *albimana* in the generally somewhat darkened face and more extensively darkened four posterior legs, differing from both in the male hypopygium (Fig. 2), which, though somewhat resembling that of *caledonica* in size has lamellæ of different shape, they are shorter, broader, and more flattened at the end, and not recurved at the tip. It requires considerable care to separate the females of this species and *caledonica*, but the wing cloud appears to be more restricted and the decussate bristles on frons placed nearer the hind orbital bristles than in *caledonica*.

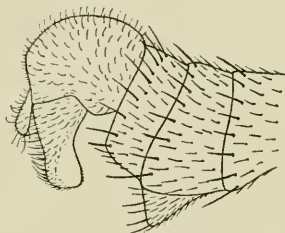


Fig. 2. *H. gentilis*, ♂ × 40.

I first recognised this species from specimens taken by the late Mr. Verrall in June, 1885, at Lyndhurst (Hampshire), but it was not until May, 1909, that I found it in numbers at Barton Mills (Suffolk), and in June, 1910, I could have taken any number in a wood near Chillesford (Suffolk). In addition to the above I have examined specimens from Devonshire, Hampshire, Herefordshire, and Glamorgan, taken by Col. Yerbury, and from Hertfordshire taken by the late Mr. A. Piffard.

### *Heteroneura verticalis*, n. sp. ♂ ♀.

Remarkable for the absence of the postvertical bristles and the shape of the male genital lamellæ, otherwise much resembling the last two species, but the thorax of the female is not so extensively darkened, resembling in this respect the thorax of *albimana* ♀. The normal number of orbital bristles is two pairs, but I have seen specimens possessing a third pair. The male genital

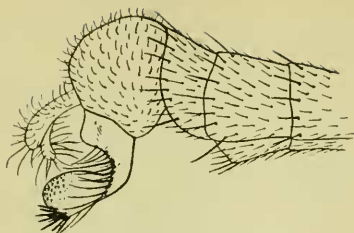


Fig. 3. *H. corticalis*, ♂ × 40.

lamellæ (Fig. 3) are long and much flattened, broad at the base then rapidly narrowing and again gradually broadening out to the rounded tip, where on the lower inner side they bear a cluster of black spines; the hind or lower margin is ciliate with long hairs.

I first doubtfully separated this species from its allies upon a female taken by the late Mr. Verrall at Dolgelly (Merioneth) in July, 1888, but further specimens taken by Col. Yerbury at Nairn in 1904, Mumbles and Bridgend (Glamorgan), in 1908, and Studland (Dorset), in 1909, removed my doubts. I have taken it myself at Stoke Wood (Herefordshire), and in some numbers in a wood near Chillesford (Suffolk), in 1910. There is a specimen in the British Museum taken by the late Mr. Piffard near Boxmoor (Herts) in 1893.

With regard to *albimana*, Meig. (which has a much smaller male hypopygium than any of the above, with very short rounded lamellæ), my own experience is that Loew's var. *obscurior* is rather more common than his var. *pallidior* or type form; these can hardly be seasonal forms for they occur together, and though there appears to be no external structural character in the genitalia by which they may be separated, there still remains the possibility that dissection may prove the so-called varietal characters to be of specific value.

Sussex Lodge, Newmarket :

March 21st, 1912.

#### HEMIPTERA IN CARMARTHENSHIRE.

BY E. A. BUTLER, B.A., B.Sc., F.E.S.

Very little seems to be known about the Hemipterous fauna of Wales. There are a few scattered notices from some of the northern counties, such as Merioneth and Carnarvonshire, and also from Brecknockshire in the centre; but all these are most fragmentary. The south has fared rather better, through the efforts of the Rev. T. A. Marshall, in Pembrokeshire, and Mr. T. R. Billups and others, in Glamorganshire. During the last six years I have had several opportunities of collecting in Carmarthenshire, which lies between these two counties, and which, I believe, had previously been practically unworked by Hemipterists. The following list contains all the Carmarthenshire species I have in my collection, and if it is taken in